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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,849	07/12/2000	Kiyotaka Iwata	U 012852-3	2520

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EXAMINER

SCHIFFMAN, JORI

ART UNIT	PAPER NUMBER
3679	

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Offic Action Summary</b>	Application No.	Applicant(s)
	09/614,849	IWATA, KIYOTAKA
	Examiner Jori R. Schiffman	Art Unit 3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 December 2002.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 17-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 July 2000 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The objection to the drawings is maintained under 37 CFR 1.83(a). Applicant's arguments notwithstanding, the drawings must show every feature of the invention specified in the claims. Therefore, the maximum height of the edge of the locking projection from the bearing surface of the head being nearly equal to and less than P/n as recited in claim 17 must be shown or the feature canceled from the claim. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: The "planar portions" and "total area of the planar portions" recited in claims 17, 18, and 23 are not described in the specification. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 3679

4. Claims 17-23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The phrase "machine screw" is considered to be new matter since it was not previously described in the disclosure. The claims have been examined as best understood.

*Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 17, 19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Giannuzzi (US 5482418).

As to the claims, Giannuzzi discloses a self-locking bolt having a head 26 with a locking function, a threaded part 25 extending from the head and provided with an external thread of a pitch P, the external thread is considered to be a "machine screw", and wherein n locking projections 27 are formed at equal angular intervals in a peripheral region of the bearing surface of the head and extend from a circumference of the head to the threaded part, the locking projections being separated from one another by planar portions of the bearing surface 26, the heights of the locking projections from the bearing surface increase gradually in a direction opposite a fastening direction, there are edges at maximum heights, the heights of the locking projections decrease steeply from the edges

in a direction opposite the fastening direction, the maximum heights of the edges are equal to or less than  $P/n$ , and a total area of the planar portions is larger than a total planar projected area of the locking projections. If the pitch  $P$  of Giannuzzi's bolt is 1,  $P/n$  is equal to  $\frac{1}{4}$  since there are 4 locking projections on the head (Fig. 10), which is nearly equal to the maximum height of the edge of the projection 27.

7. Claims 18, 20, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Olsen (US 2128757).

Regarding the claims, Olsen discloses a self-locking bolt having a head 14 with a locking function and a threaded part 12 extending from the head and provided with an external thread of pitch  $P$ , the external thread being considered a "machine screw", wherein  $n$  locking recesses 38 are formed in a peripheral region of the bearing surface of the head, extend from a circumference of the head to the threaded part, and are located at equal angular intervals in a bearing surface of the heads, the recesses separated from one another by planar portions of the bearing surface 32, the depths of the recesses from the bearing surface decreasing gradually in a direction opposite a fastening direction in which the head is rotated for fastening to minimum depths, there being edges at the joints of end walls of the recesses at positions of maximum depths from the bearing surface, when the bearing surface compresses a member contacting it, the edges function so that a portion of the member is forced to bulge into at least one of the locking recesses in a small protrusion (see Fig. 6), and a total area of the planar portions is larger than a total planar projected area of the locking projections.

***Response to Arguments***

8. Applicant argues that the Giannuzzi patent does not disclose the instant invention because it is a self-drilling anchor and not a “machine screw” as now claimed. In response, as indicated above, the phrase “machine screw” is considered to be new matter since there is no explanation of a “machine screw” provided in the disclosure. Therefore, Giannuzzi’s self-drilling anchor is considered to have “machine screw” threads and reads on the claims.

9. Applicant's arguments with respect to claims 18, 20, 22, and 23 have been considered but are moot in view of the new grounds of rejection, which were necessitated by the amendment.

***Conclusion***

10. The following patents are cited further to show the state of the art with respect to screws and nuts with locking recesses and protrusions: U.S. Pat. No. 6361259 to Koeppel et al., U.S. Pat. No. 2037586 to Olsen, and U.S. Pat. No. 844750 to Rieschick.

11. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

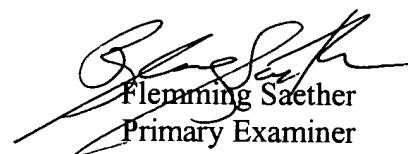
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jori R. Schiffman whose telephone number is 703-305-4805. The examiner can normally be reached on M-Th, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 703-308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-3179.

Jori R. Schiffman  
Examiner  
Art Unit 3679

JS  
February 21, 2003



Flemming Saether  
Primary Examiner